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Varietal Description of Flanders Flax

Origin and Breeding

Flanders, tested as FP859, was developed at the Crop Development Centre, University of Saskatchewan, using the cross McGregor/Dufferin. The cross was made at the Agriculture Canada Research Station, Morden in 1976 and then the F_3 seed was sent to the Crop Development Centre. The breeding technique used was the pedigree method, with 136 F_9 lines used to produce breeder seed in this variety. The selection criteria used were maturity, oil content, rust resistance, seed yield and oil quality. Breeder seed was first bulked in 1988.

Varietal characteristics

Plant characteristics

Flowers: small to medium in size; light to medium blue petals; blue anthers; colorless filaments with bluish tips; blue style

Boll: small to medium in size; semi-dehiscent at maturity; smooth false septa

Straw: medium tall; good straw strength

Maturity: medium maturity; earlier than McGregor but later than NorLin

Disease reaction: Flanders is immune to North American races of rust *(Melampsora lini)* and is moderately resis-tant to wilt *(Fusarium oxysporum)*

Seed characteristics

Seed size: small to medium in size, similar to McGregor, 5.6 g/1000

Seed color: brown

Quality: medium to high oil content, similar to Dufferin; good oil quality, similar to NorLin

Performance

Flanders is adapted to all flax growing areas of western Canada. The seed yield of Flanders exceeds or equals that of McGregor in all flax growing areas of western Canada. It also contains approximately 1 per cent more oil. The iodine value of the oil and the protein content of the meal is slightly greater than that of McGregor. The seed yield of Flanders is also 10 per cent greater than that of McGregor in late seeded tests. Flanders has a small seed size.

Maintenance of breeder seed

Crop Development Centre, University of Saskatchewan

Canadian distributor

SeCan Association

Recommended by

Prairie Registration Recommending Committee on Grain

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Table 1. Agronomic and quality performance of Flanders and check varieties, flax co-operative test by Western Canada soil zones*, 1986-1988

Variety	Yield (kg/ha)	Days to Maturity	Height (cm)	1000 Seed wt (g)	Oil Content (%)	Protein Iodine Number	Content (%)
Black Soils							
Flanders	1780	105.5	57	5.5	44.2	183	33.6
Andro	1550	102.3	54	6.0	42.3	185	33.6
Dufferin	1620	109.2	62	5.6	44.0	181	32.7
Linott	1520	96.8	52	5.8	42.9	183	33.6
McGregor	1750	108.0	61	5.4	43.1	182	32.5
Noralta	1560	101.0	60	5.4	41.6	182	32.6
NorLin	1670	101.0	54	6.0	43.0	181	32.9
NorMan	1680	104.5	56	5.9	44.0	178	33.3
Vimy	1600	102.3	56	6.4	44.1	184	32.6
No. of tests	16	9	15	17	17	17	12
Brown Soils							
Flanders	1890	109.6	48	5.5	45.4	185	32.0
Andro	1580	109.1	48	6.0	43.2	187	32.5
Dufferin	1750	110.3	53	5.8	45.5	183	31.2
Linott	1560	109.3	47	6.0	43.4	185	32.4
McGregor	1860	110.9	52	5.6	44.3	184	32.0
Noralta	1710	108.1	52	5.5	42.2	185	31.7
NorLin	1830	109.1	49	6.1	43.6	184	31.9
NorMan	1830	109.2	48	5.9	45.1	180	31.8
Vimy	1830	109.8	50	6.8	45.2	186	32.0
No. of tests	15	7	13	16	16	16	7
Black and Grey Soils							
Flanders	2340	120.3	58	5.9	45.6	191	31.8
Andro	2210	120.2	61	6.2	43.7	192	32.5
Dufferin	2190	122.0	63	6.4	45.5	190	30.8
Linott	2010	118.4	58	6.0	43.3	189	30.5
McGregor	2330	122.6	6	5.9	44.9	190	31.2
Noralta	2180	115.8	62	5.8	43.1	190	30.5
NorLin	2280	119.1	61	6.4	44.1	190	31.4
NorMan	2210	119.6	59	6.5	45.2	186	31.4
Vimy	1870	120.5	61	6.6	44.8	191	31.5
No. of tests	9	5	8	10	10	10	3

*Zone 1 (black soils of Manitoba and Saskatchewan) Morden, Portage la Prairie, Brandon, Winnipeg, Indian Head, Arcola, Melfort, Glenlea
Zone 2 (brown soils of Saskatchewan and Alberta) Regina, Swift Current, Saskatoon, Elrose, Scott, Lethbridge, Outlook
Zone 3 (black and grey soils of Alberta) Edmonton, Beaverlodge, Fort Vermilion, Lacombe, Olds
Zone 4 (Eastern Canada) Elora, New Liskeard, Pintendre

Table 2. Agronomic performance of Flanders and check varieties in the late-seeded flax co-operative test*, 1986-1988

Variety	Yield (kg/ha)	Yield as a % of Linott	Days to Mature
Flanders	1180	83	106
Andro	1250	87	101
Dufferin	970	68	112
Linott	1430	100	99
McGregor	1050	73	109
Noralta	970	68	106
NorLin	1300	91	100
NorMan	1090	76	105
Vimy	1300	91	103
No. of tests		7	7

*Portage la Prairie, Indian Head, Morden and Saskatoon

Table 3. Fusarium wilt ratings and lodging scores of Flanders and check varieties, flax co-operative trials, 1986-1988

Variety	Wilt* (1-9)	Lodging** (1-9)
Flanders	4.1	2.0
Andro	5.2	1.8
Dufferin	3.6	2.5
Linott	4.5	2.5
McGregor	3.3	1.8
Noralta	4.8	2.4
NorLin	4.5	2.1
NorMan	3.8	2.1
Vimy	4.2	3.9
No. of tests	6	9

*Readings on plant vigour on a 1-9 scale (1 = most vigorous; 9 = least; Indian Head and Morden)

**Readings on a 1-9 scale (1 = best; 9 = poorest)

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